

# Washington News Test Results

## September 4<sup>th</sup> – October 3<sup>rd</sup> 2008

### Installation of *Cold-Plus*<sup>TM</sup> Refrigeration Enhancer

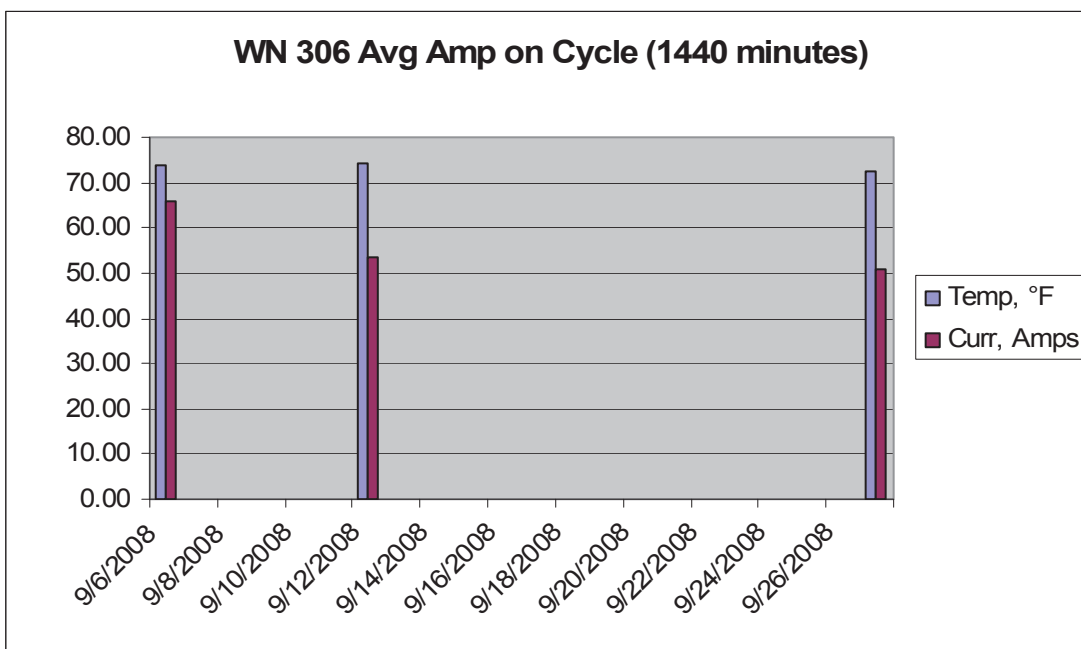
#### Test Criteria:

1. Install Hobo Loggers on Unit number 306 at the Washington News building in Alexandria, Va.
2. Loggers are set to measure the following at two minute intervals:
  - a. Ambient Temperature at the compressor/condenser
  - b. Amp draw
  - c. Suction line temperature
  - d. Liquid line temperature
  - e. Return Air Temperature
  - f. Return Air Humidity
  - g. Supply Air Temperature
  - h. Supply Air Humidity

Run times are calculated by using the amp draw measured every two minutes to determine if the compressor is operating. Similar ambient temperatures were used to compare amp draw in order to eliminate temperature differentials. A base line of operating characteristics was created from September 4<sup>th</sup> through September 7<sup>th</sup>, 2008. *Cold-Plus*<sup>TM</sup> was installed on September 8<sup>th</sup> and the logging was continued until October 3<sup>rd</sup>, 2008.

## Test Results:

In the first chart you will see three days compared with similar temperatures. The first date is from the base line measurement and the following two are after the installation of *Cold-Plus™*. The days chosen also had a 1440 minute run time for the 24 hour measurement period.

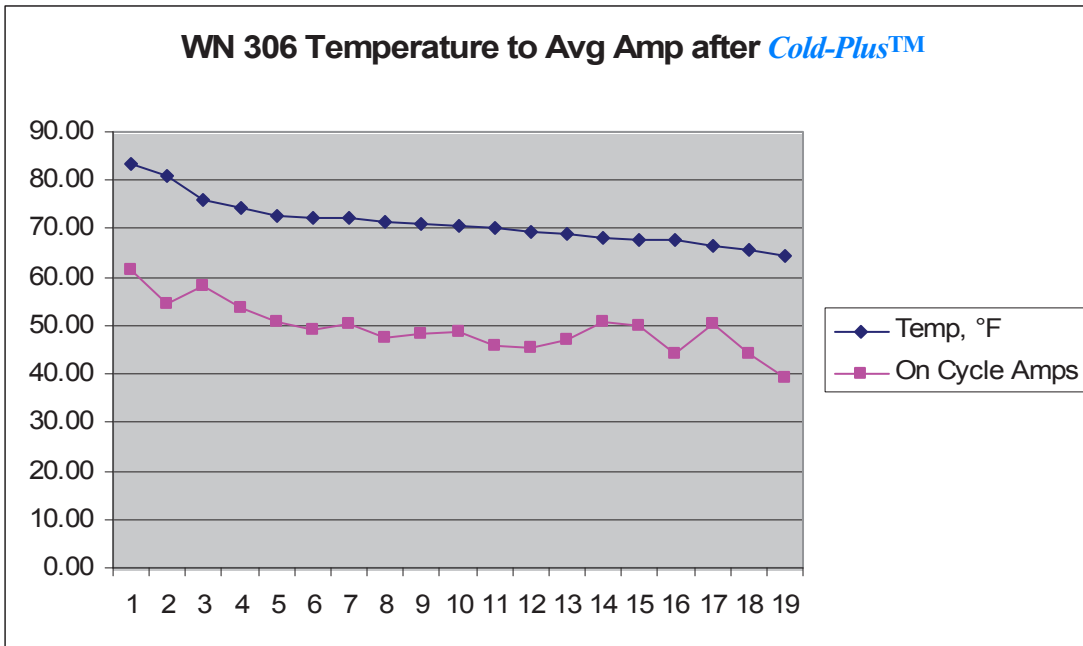


The actual numbers for those 24 hour periods are shown below:

Date	Temp, °F	Curr, Amps	% Change
9/6/08	73.80	65.78	
9/12/08	74.15	53.58	<b>18.6%</b>
9/27/08	72.54	50.76	<b>22.8%</b>

As you can see there is a drop in amp draw of between **18** and **22%** for comparable operating conditions after the installation of *Cold-Plus™* Refrigerant Enhancer.

Also of interest is the relationship of ambient temperature and amp draw. The points shown below are after *Cold-Plus™*. The temperatures are the 24 hour average and the amps are the computed average for the run time cycle.



### Conclusion:

The addition of *Cold-Plus™* in this test reduced the full run amp draw by **18** to **22%** which is on the upper limit of the 10-15% averages we normally see.